

**CHAPTER 21**  
**Fire Prevention**  
**(Rep. & recr. #48-83) (Am. #10-99)**

**21.07 Installation of Automatic Fire Sprinkler Systems**

(1) PURPOSE. Whereas automatic fire sprinkler systems are one of the most effective means of protecting life and property from the effects of fire, this section is created to provide rules and regulations for contractors and property owners for the installation and maintenance of sprinkler systems. This section shall apply to new and existing buildings.

(2) NEW OCCUPANCIES AND LOCATIONS. Automatic fire sprinkler systems shall be installed and maintained in operable condition in the following new occupancies and locations:

(a) Within all new factories, workshops, office buildings, mercantile establishments, warehouses, passenger terminals, exhibition buildings, new motor vehicle repair garages, motor vehicle storage garages, body shops, and places of public assembly with less than a 100 person occupant load where:

1. (Am. #49-02) (Repealed #4-17)
2. (Am. #49-02) (Am. #4-17) All buildings 6,000 square feet or more in total area or where required by Wisconsin Administrative Code SPS Chapters 361-366; or
3. The building has three (3) interior stories or more in height regardless of area.
4. In any basement or subbasement in a new motor vehicle repair garage, motor vehicle storage garage or body shop if a vehicle can be parked therein.

(b) Within the following residential occupancies:

1. (Am. #1-13) (Am. #4-17) In structures having the occupancy classification residential R-1 and R-2 under section 202 of the International Fire Code, the buildings shall be protected by an automatic sprinkler system installed and maintained in accordance with IFC §§903.2.8 and 901.6.
2. (Am. #18-08) (Am. #1-13) (Am. #4-17) In structures having the occupancy classification residential R-3 and R-4 under section 202 of the International Fire Code, the

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buildings shall be protected by an automatic sprinkler system installed and maintained in accordance with Wis. Admin. Code SPS §362.0903.

(c) In new theaters and buildings of public assembly over 100 person occupancy, new health care facilities including hospitals, nursing homes, convalescent and group care centers, new detention and correctional facilities, day care facilities licensed to accommodate public or private day care for twenty (20) or more children, automatic sprinklers shall be installed throughout such buildings regardless of size or type of construction.

(d) New schools, colleges and universities.

1. (Am. #18-08) (Rep. #4-17)

2. (Am. #18-08) Where the building is of Types 3-5 of non-fire resistive construction, throughout the building regardless of size.

(e) Airport Buildings. (Am. #49-02) If the plans for the building were submitted before July 1, 2002, control towers; terminal buildings; buildings that are primarily used for repair or servicing of aircraft; buildings that have attached area used for storage, office manufacturing dining or other similar activities; any hangar with an area over 15,000 square feet which is constructed after the date of adoption of this ordinance. This subsection shall not apply to buildings the plans for which were submitted on or after July 1, 2002.

(f) High hazard occupancy: Any new building which by reason of its construction, or combustible operations is deemed a severe life or property hazard by the Fire Chief or his designate. This includes, but shall not be limited to the following operations:

1. The manufacturing, storage, handling, spraying of paint and varnish or other related operations.

2. Storage of combustible and flammable gases including but not limited to acetylene, hydrogen, liquid propane, in excess of 2,000 cubic feet.

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3. Manufacturing and storage of explosives and pyrotechnics.
4. Commercial building basements over 2,500 square feet with combustible materials contained or stored within and not subject to Wisconsin Administrative Code.

(g) Exceptions. Automatic fire sprinkler systems are not required in the following:

1. Rooms or buildings used for the manufacture or storage of aluminum powder, calcium carbide, calcium phosphate, metallic sodium or potassium, quick lime, magnesium powder, sodium peroxide or like materials where the application of water may cause or increase combustion.
2. The portion of the building or foundry used to melt and pour metal or glass into a mold or cast and portions of buildings used for heat treating operations.
3. (Am. #18-08) In any building where the Fire Chief determines that the use of water as a fire extinguishing agent would increase the hazard. However, an automatic fire extinguishing system as defined in IFC section 902.1 using an extinguishing agent other than water, and/or an automatic detection system shall be installed.
4. (Rep. #4-17)
5. (Rep. #4-17)

(3) EXISTING BUILDINGS. All existing public buildings or places of employment, additions thereto, and all use changes shall conform to this Code as follows:

- (a) The entire building if more than 50 percent of the cumulative square footage of the building, place of employment or addition thereto is remodeled, after the adoption of the City's Automatic Fire Sprinkler System ordinance on August 7, 1996, in one or more increments over the life of the building.
- (b) An addition, regardless of size or occupancy, made to a building with an existing automatic fire sprinkler system.

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(c) If an existing building which was built before August 7, 1996, is divided by a four hour division fire wall as defined in COMM 51.02(B) the division shall result in two separate buildings. Only one such fire division wall will be allowed per building.

**(4) APPROVAL OF PLANS AND SYSTEMS.**

(a) (Am. #4-17) Prior to the installation of an automatic fire sprinkler system, four copies of the plans and specifications shall be submitted to the Fire Prevention Bureau for its review. Approved plans shall be stamped "Conditionally Approved" by the Fire Prevention Bureau, including the date of such approval, and the signature of the officer granting approval. Pursuant to Wis. Admin. Code SPS §361.37, a conditional approval of a plan by the Department may not be construed as an assumption of any responsibility on the part of the Department for the design or construction of the project. Three copies shall be returned to the owner, and one copy will be kept on file in the Fire Prevention Bureau. All sprinkler systems and plans must meet the standards of the N.F.P.A., SPS and the Municipal Code of the City of Waukesha.

(b) (Am. #4-17) All plans submitted to the Fire Prevention Bureau shall be signed and sealed in accordance with Wis. Admin. Code SPS §361.31.

(c) Conditional approval of the automatic fire sprinkler system plans by the Fire Prevention Bureau is not intended to confirm the accuracy of any calculations or system design performed by the contractor. The contractor is responsible for the accuracy of any calculations of the system's design.

(d) No work may begin on the installation of an automatic fire sprinkler system or alteration of a fire sprinkler system unless it is approved by the Fire Prevention Bureau. If work is started before plan's received "conditional approval", all work must stop immediately.

(e) No automatic fire sprinkler system shall receive final approval prior to an acceptance test being performed before the Fire Chief or his/her designee. The building may not be occupied before the test is completed and approved. All acceptance tests will be scheduled by the Fire Prevention Bureau. No acceptance test will be conducted unless the Fire Prevention Bureau receives at least forty-eight (48) hour advance notice.

(f) Additions or changes involving less than 20 sprinkler heads to an existing approved automatic fire sprinkler system requires a letter from the

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owner or occupant of the building to the Fire Prevention Bureau describing the installation including a sketch of the proposed additions or changes. The Fire Prevention Bureau may require a plan review that meets the requirements of this ordinance.

**(5) INSTALLATION.**

- (a) (Am. #4-17) Approved automatic fire sprinkler systems shall be installed in accordance with the standards of the current edition of N.F.P.A. relating to the installation of sprinkler systems and other applicable standards of SPS, and the Municipal Code of the City of Waukesha.
- (b) Compressors for Dry Pipe Systems are required to be wired directly into the building's electrical power system.
- (c) (Am. #59-01) All compressors for Dry Pipe Systems will have low limit air switches and alarms separate from any other alarms located on the premise.
- (d) Hydrant water flow test data shall be performed no more than one (1) year prior to the submission of the automatic fire sprinkler plans. The data shall be obtained in cooperation with the Waukesha Water Utility.
- (e) (Am. #39-99) All fire alarm systems shall be interconnected. One horn strobe alarm shall be provided on the outside of the building by the F.D.C.

**(6) MAINTENANCE OF EQUIPMENT.**

- (a) Automatic fire sprinkler systems and standpipe systems shall be maintained in operative conditions at all times.
- (b) It shall be unlawful for any owner or occupant to reduce the effectiveness of the protection so required, except that this shall not prohibit the owner or occupant from temporarily reducing or discontinuing the protection where necessary to make tests, repairs, alterations or additions.
- (c) The Fire Prevention Bureau shall be notified when the system has been shut down and a state licensed sprinkler contractor is not on site. The Fire Prevention Bureau shall be notified when the system has been restored to service.

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(d) (Cr. #59-01) The building owner or occupants shall not make changes in the occupancy, its use or process, or materials used or stored in the building without evaluation by the Waukesha Fire Department of the fire protections systems and their capability to protect the new occupancy's use of materials. The evaluation shall consider factors that include but are not limited to occupancy changes, process or material changes, building renovations; such as relocating walls, adding mezzanines and ceilings below sprinklers, the removal of heating systems and spaces with piping subject to freezing.

(7) INSPECTIONS. Every sprinkler system required by the Municipal Code, or by the Wisconsin Administrative Code shall be tested in accordance with N.F.P.A. 25. The results of the testing shall be kept on site and available for review by the Fire Prevention Bureau.

(8) FIRE DEPARTMENT HOSE CONNECTIONS. (Am. #4-17) Every automatic sprinkler system installed in new or existing buildings shall be equipped with at least one Fire Department hose connection at a location approved by the Fire Prevention Bureau and meeting SPS standards.

(9) FEES. (Am. #59-01) (Am. #18-08)

(a) Basic fire sprinkler plan review fee \$165.00

(b) Fire sprinkler plans review with hydraulic calculations \$220.00

(c) Fire sprinkler hydraulic calculations verification only \$140.00

(d) Each additional review of the same system \$140.00

(e) Site inspection of fire sprinkler installations during installation \$165.00

(f) Small additions (under twenty (20) sprinkler heads) and changes  
\$85.00

(10) LICENSE REQUIRED FOR INSTALLATION, MAINTENANCE OR INSPECTION. (Cr. #9-04)

(a) (Am. #18-08) (Am. #4-17) No person may install, maintain or repair automatic fire sprinkler systems unless the person holds a license as required by Wis. Admin. Code SPS §§305.50(1)(a) and (1)(b).

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(b) (Am. #18-08) (Am. #4-17) No person may conduct annual inspection and testing of an existing automatic fire sprinkler system and its components unless the person holds a license as required by Wis. Admin. Code SPS §305.50(2).